
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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MARKETABLE PHOSPHATE ROCK—CROP YEAR 1997

U.S. production of marketable phosphate rock increased more than 4% to 46.1 million metric tons in Crop Year 1997 (July 1, 1996-June 30, 1997) compared with 44.2 million tons in Crop Year 1996, according to the U.S. Geological Survey (USGS).

The data for this report are collected through a monthly survey and an annual survey of U.S. phosphate rock producers. Twelve companies produced phosphate rock in the United States, and participated in the voluntary surveys, representing 100% of the production, sold or used, and value data shown in the tables. Trade data are provided by the U.S. Bureau of the Census.

Marketable phosphate rock sold or used, including exports, was 43.2 million tons, slightly higher than in Crop Year 1996. Producers stocks increased 13% nationwide, but stock changes varied widely on a regional basis. Stocks in Florida and North Carolina increased 31%, and stocks in the West decreased 26%. Remaining stocks represented slightly more than 2 months of average production in Crop Year 1997.

The average value of marketable phosphate rock sold or used in the United States increased slightly to \$23.70 per ton, F.o.b. mine in Crop Year 1997. Average values reported by producers in Florida and North Carolina increased to \$23.80 at the end of June 1997. Prices for material produced in Idaho and Utah increased to \$23.16.

USGS is no longer able to publish detailed export data provided by domestic phosphate rock producers because of proprietary data requirements and the low number of producers that continue to export. Domestic producers have significantly

reduced their exports of phosphate rock because of diminishing reserves. Crop Year 1997 export data in table 1 are from Census and not directly comparable to the Crop Year 1996 data in the table. Although Census reports phosphate rock exports, some of the data are suppressed, making the export data incomplete.

During Crop Year 1997, imports of phosphate rock were estimated at 1.8 million tons, slightly higher than Crop Year 1996. Data reporting the imports of phosphate rock from Morocco, the dominant supplier, are substantially suppressed by Census; however, estimates were made based on data provided to USGS by the single Moroccan phosphate producer and Census data for other countries.

Because production increased at a faster pace than did consumption, and exports were believed to have decreased, stocks grew. Nearly all phosphate rock is consumed in the production of phosphate fertilizers, with diammonium phosphate the most popular product. Domestic consumption of phosphate fertilizers is relatively stable over the long term. Fluctuation may occur from year to year due to a wide range of variables including weather and grain inventories; however, in general, this market is considered mature. Phosphate fertilizer exports determine the demand for phosphate rock, and in a large part, the health of the phosphate industry.

Recent years have seen strong fertilizer exports that extended into Crop Year 1997, and so the phosphate industry continues to grow. In Crop Year 1997, phosphate rock consumption was higher than it had been previously in this decade.

TABLE 1
SALIENT U.S. PHOSPHATE ROCK STATISTICS 1/

(Thousand metric tons and thousand dollars unless otherwise specified)

	1996	1997
Mine production (crude ore)	172,000	174,000
Marketable production	44,200	46,100
P2O5 content	13,000	14,100
Value	\$1,020,000	\$1,090,000
Average, dollars per metric ton 2/	\$23.10	\$23.70
Sold or used by producers 3/	42,500	43,200
P2O5 content	12,700	12,700
Value 4/	\$982,000	\$1,030,000
Average, dollars per metric ton	\$23.10	\$23.70
Exports 5/	2,200 r/	1,600 6/
P2O5 content	694	NA
Value	\$75,200	NA
Average, dollars per metric ton	\$34.23	\$31.28
Imports for consumption e/ 7/	1,790 r/	1,810
C.i.f. value	\$90,600 e/ r/	\$105,000 e/
Average, dollars per metric ton	\$50.72	\$57.91
Consumption 8/	42,100 e/	43,400 e/
Stocks, Dec. 31: Producers	6,880	7,790

e/ Estimated. r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; except prices.

2/ Average value is based on sold or used values.

3/ Includes domestic sales and exports.

4/ Total value of all domestic and export sales.

5/ Exports reported to the U.S. Geological Survey by companies.

6/ Source: Bureau of the Census.

7/ Some phosphate rock import tonnage and value were suppressed by the Bureau of the Census. Estimates are based on reports from the Bureau of the Census and the Moroccan phosphate rock producer.

8/ Expressed as sold or used plus imports minus exports.

TABLE 2
PRODUCTION OF PHOSPHATE ROCK IN THE UNITED STATES, BY REGION 1/

(Thousand metric tons and thousand dollars)

Period and region	Mine production (Crude ore)		Marketable production			
			Beneficiated			Ending stocks, rock
	Rock	P2O5 content	Rock	P2O5 content	Value 2/	
Crop year 1996	172,000	25,200	44,200	13,000	1,020,000	6,880
Crop year 1997:						
July-December, 1996:						
Florida and North Carolina	85,100	9,740	19,300	5,680	464,000	4,700
Idaho and Utah	3,880	997	3,430	997	77,200	1,690
Total	89,000	10,700	22,700	6,680	541,000	6,390
January-June, 1997:						
Florida and North Carolina	81,200	9,480	20,200	6,460	476,000	6,200
Idaho and Utah	3,850	1,080	3,130	1,010	74,700	1,590
Total	85,000	10,600	23,400	7,460	551,000	7,790
Grand total	174,000	21,300	46,100	14,100	1,090,000	XX

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Calculated value based on the sold or used value.

TABLE 3
PHOSPHATE ROCK SOLD OR USED BY PRODUCERS
IN THE UNITED STATES, BY GRADE 1/

(Thousand metric tons and thousand dollars)

Period and grade (percent BPL 2/ content)	U.S. total		
	P2O5		Value 3/
	Rock	content	
Crop year 1996	42,500	12,700	982,000
Crop year 1997:			
July-December 1996:			
60 to less than 66	18,600	5,460	439,000
Other 4/	3,780	1,150	92,600
Total	22,400	6,610	532,000
January-June 1997:			
60 to less than 66	17,400	5,060	402,000
Other 4/	3,440	1,000	92,000
Total	20,900	6,100	494,000
Grand total	43,200	12,700	1,030,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate) = 0.458% P2O5.

3/ F.o.b. mine.

4/ Includes less than 60 and greater than 70 percent BPL content.

TABLE 4
PHOSPHATE ROCK SOLD OR USED BY PRODUCERS
IN THE UNITED STATES, BY USE AND REGION 1/

(Thousand metric tons)

Period and use	Region					
	Florida and North Carolina		Idaho and Utah		U.S. total	
	P2O5		P2O5		P2O5	
	Rock	content	Rock	content	Rock	content
Crop year 1996	37,200	11,200	5,340	1,530	42,500	12,700
Crop year 1997:						
July-December, 1996						
Domestic:						
Agricultural	18,900	5,560	1,560	523	20,500	6,080
Industrial	W	W	1,370	368	W	W
Subtotal	W	W	2,930	891	W	W
Exports: 2/	W	W	--	--	W	W
Total	19,400	5,720	2,930	891	22,400	6,610
January-June, 1997						
Domestic:						
Agricultural	17,900	4,470	1,580	490	19,500	5,240
Industrial	W	W	1,020	278	W	W
Subtotal	W	W	2,600	768	W	W
Exports: 2/	W	W	--	--	W	W
Total	18,300	5,300	2,600	768	20,900	6,070
Grand total	37,700	11,000	5,520	1,660	43,200	12,700

W Withheld to avoid disclosing company proprietary data; included in "Total."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Exports reported to the U.S. Geological Survey by companies.

TABLE 5
VALUE OF U.S. PHOSPHATE ROCK, BY GRADE

(Dollars per metric ton, f.o.b. mine)

Grade (percent BPL 1/ content)	Crop year 1996			Crop year 1997		
	Domestic	Export	Average	Domestic	Export	Average
70 to less than 72	W	27.41	26.64	W	W	W
66 to less than 70	21.98	27.93	22.29	28.32	49.61	28.94
60 to less than 66	23.48	--	23.48	22.72	W	22.56
Weighted average 2/	22.50	34.23	23.10	23.89	31.28	23.70

W Withheld to avoid disclosing company proprietary data.

1/ 1.0% BPL (bone phosphate of lime or tricalcium phosphate)=0.458% P2O5.

2/ Includes less than 60 and 72 and greater in addition to the grades listed.